

AMENDMENTS TO THE CLAIMS

The claims in this listing will replace all prior versions, and listings of claims in the application.

Listing of Claims:

1. (Canceled)

2. (Currently Amended) A radio reception apparatus comprising:

a receiver configured to receive a signal on a per time unit basis, the received signal including a known signal pattern on a predetermined per time unit basis;

an adjuster configured to adjust a filter for filtering the received signal using the known signal pattern on a per time unit basis; and

a canceller configured to cancel an interference component included in the time unit using the adjusted filter, the interference component comprising adjacent channel interference and inter-symbol interference;

wherein the adjuster comprises:

a modulation scheme determiner configured to process likelihoods calculated for individual modulation schemes and to determine the modulation using the known signal pattern;

[[and]]

an interference level detector configured to compare signal levels, which correspond to a plurality of frequencies obtained from a result of a frequency analysis, to a

predetermined threshold value, which is updated per time unit, and to detect locations and levels of adjacent channel interference; and

a tap coefficient controller configured to control tap coefficients to set the filter according to the determined modulation scheme,

wherein the adjusted filter is adjusted based on the determined modulation scheme of the modulation scheme determiner.

3. (Currently Amended) A radio reception apparatus comprising:

a receiver configured to receive a signal on a per time unit basis, the received signal including a known signal pattern on a predetermined per time unit basis;

an adjuster configured to adjust a filter for filtering the received signal using the known signal pattern on a per time unit basis; and

a canceller configured to cancel an interference component included in the time unit using the adjusted filter, the interference component comprising adjacent channel interference and inter-symbol interference;

wherein the adjuster comprises:

a frequency converter configured to perform a frequency analysis of the received signal;

an interference level detector configured to ~~detect adjacent channel interference from a result of the frequency analysis~~ compare signal levels, which correspond to a plurality of frequencies obtained from a result of a frequency analysis, to a predetermined threshold value, which is updated per time unit, and to detect locations and levels of adjacent channel interference;

a modulation scheme determiner configured to process likelihoods calculated for individual modulation schemes and to determine the modulation using the known signal pattern; and

a tap coefficient controller configured to control tap coefficients to set the filter according to the determined modulation scheme and a detection result of adjacent channel interference,

wherein the adjusted filter is adjusted based on the determined modulation scheme of the modulation scheme determiner,

wherein the tap coefficients are determined based upon the detected locations and detected levels of adjacent channel interference determined by the interference level detector.

4. (Currently Amended) A radio reception apparatus comprising:

a receiver configured to receive a signal on a per time unit basis, the received signal including a known signal pattern on a predetermined per time unit basis;

an adjuster configured to adjust a filter for filtering the received signal using the known signal pattern on a per time unit basis; and

a canceller configured to cancel an interference component included in the time unit using the adjusted filter, the interference component comprising adjacent channel interference and inter-symbol interference;

a transmission path characteristic estimator configured to estimate a transmission path characteristic using the known signal pattern included in the received signal from which interference is canceled;

wherein the adjuster comprises:

an error measurer configured to measure an error of the received signal that occurs due to a transmission path characteristic by comparing the known signal pattern included in the received signal with a known signal pattern obtained by canceling the transmission path characteristic; [[and]]

an interference level detector configured to compare signal levels, which correspond to a plurality of frequencies obtained from a result of a frequency analysis, to a predetermined threshold value, which is updated per time unit, and to detect locations and levels of adjacent channel interference; and

a tap coefficient controller configured to control tap coefficients to set the filter based on the measured error and a reception level of the received signal,

wherein the tap coefficients are determined based upon the detected locations and detected levels of adjacent channel interference determined by the interference level detector.

5. (Previously Presented) The radio reception apparatus according to claim 2, wherein the canceller comprises

a plurality of filters having different filter characteristics; and

the adjuster comprises a filter selector configured to select one of the plurality of filters according to the determined modulation scheme.

6. (Cancelled)

7. (Previously Presented) The radio reception apparatus according to claim 2, wherein the adjuster adjusts a filter characteristic of the filter such that a combined characteristic of said filter with a baseband filter at a communicating partner station has a Nyquist characteristic.

8. (Previously Presented) A communication terminal apparatus including the radio reception apparatus recited in claim 2.

9. (Previously Presented) A base station apparatus including the radio reception apparatus recited in claim 2.

10. (Currently Amended) A reception filtering method comprising:

receiving a signal on a per time unit basis, the received signal including a known signal pattern on a predetermined per time unit basis;

adjusting a filter for filtering the received signal using the known signal pattern on a per time unit basis; and

canceling an interference component included in the time unit using the adjusted filter, the interference component comprising adjacent channel interference and inter-symbol interference;

wherein the adjusting comprises

processing likelihoods calculated for individual modulation schemes;

comparing signal levels, which correspond to a plurality of frequencies obtained from a result of a frequency analysis, to a predetermined threshold value, which is updated per time unit;

detecting locations and levels of adjacent channel interference;

determining a modulation scheme using the known signal pattern; and

controlling tap coefficients to set the filter according to the determined

modulation scheme,

wherein the adjusting of the adjusted filter is based on the determined modulation scheme,

wherein the tap coefficients are determined based upon the detected locations and

detected levels of adjacent channel interference.

11. (Cancelled)